

## **REMARKS**

### **I. INTRODUCTORY REMARKS**

The Office Action dated June 9, 2009 has been received and its contents carefully considered. Applicant submits the following Supplemental Amendment for the above-identified application to supplement the Amendment and Response after Final and Request for Continued Examination (RCE) filed by the Applicant on July 30, 2009, in response to the Office Action mailed on June 9, 2009, by the U.S. Patent and Trademark Office. Applicant respectfully requests reconsideration and entry of the following claim amendments.

By this amendment, claims 1, 3, 4, 6, 8, 10, 12, 15, 17, and 18 have been amended and claim 11 has been canceled. Claims 21 and 22 have been added. Applicant respectfully submits the claim amendments and additions have been done without the addition of new matter, support from, for example, paragraph 25 of the originally filed specification and the originally filed claims. Accordingly, upon entry of this amendment, claims 1, 3-8, 10, 12-15, and 17-22 are pending in the application. The Applicant thanks the Examiner for the careful consideration of this application. Based on the foregoing amendments and the following remarks, the Applicant respectfully requests that the Examiner reconsider all outstanding objections and rejections and that they be withdrawn.

### **II. EXAMINER INTERVIEW**

Applicant thanks Examiner Seye and Supervisory Examiner Hyung for the telephonic interview of August 21, 2009. During the interview, the Office Action of June 9, 2009 was discussed, as well as the claim language of independent claim 1. The Examiners indicated that claim 1, combined with claims 3-6, would be allowable.

### **III. CLAIM REJECTIONS UNDER 35 U.S.C. § 103**

On pages 2-6 of the Office Action, claims 1, 3-7, 15-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent Publication No. US 2004/0267691 to Vasudeva *et al.* (hereinafter "Vasudeva") in view of U.S. Patent No. 6,075,938 to Bugnion *et al.* (hereinafter "Bugnion").

Initially, for the purpose of this response, the Applicant notes that the Office Action does not appear to set forth a reason for rejecting claim 1, thus Paragraph 8 of the Office Action is presumed to be rejecting claim 1 for the same reasons as claim 8.

Claim 1 is allowable for at least the following two reasons.

**First**, no reasonable combination of Vasudeva and Bugnion discloses or renders obvious “communicating the data stored in the page from the first virtual machine to the second virtual machine by updating a page table by a processor by **remapping** the page **from being associated** with the first virtual machine **to being associated** with the second virtual machine” as recited in claim 1. The Office Action acknowledges that Vasudeva does not teach or suggest this recited claim feature.

Bugnion does not provide the missing disclosure or suggestion. Referring to the rejection of claim 1, the Office Action aligns the message transfer of Bugnion with “**remapping** the page **from being associated** with the first virtual machine **to being associated** with the second virtual machine.” However, the message transfer of Bugnion does not remap the page “from being associated with the first virtual machine to being associated with the second virtual machine,” as recited in claim 1. Rather, as shown in FIG. 4 of Bugnion and cited by the Office Action, a “message transfer sent between virtual machines causes the DMA unit to map the page read-only into both the sending and receiving virtual machine’s physical address spaces.” Bugnion, col. 16, lines 1-12. Bugnion further describes this mapping as allowing “memory sharing” where “as a result, all read-only pages can be shared between virtual machines.” Bugnion, col. 16, line 1 and col. 16, lines 30-31. Therefore, no reasonable combination of Vasudeva and Bugnion discloses or renders obvious “remapping the page from being associated with the first virtual machine to being associated with the second virtual machine,” as recited in amended claim 1.

**Second**, no reasonable combination of Vasudeva and Bugnion discloses or renders obvious “determining **whether the instruction requires an immediate VM exit** from the first virtual machine; and exiting the first virtual machine **based on said determining**,” as recited in amended claim 1. Vasudeva does not teach or suggest “exiting the first virtual machine based on said determining.” The Office Action aligns “transferring the data from the queue” with the claimed

“exiting the first virtual machine based on said determining.” However, the transferring of data from a queue in Vasudeva does not teach or suggest “exiting the first virtual machine” as recited in amended claim 1, much less exiting based on “determining whether the instruction requires an immediate VM exit from the first virtual machine,” as recited in amended claim 1. Rather, the virtual machines of Vasudeva are simple Java Virtual Machines created for running Java applications collecting data from probes for transmission to base stations. Vasudeva, paragraphs 41 and 46. Instead of “exiting the first virtual machine based on said determining,” Vasudeva further describes that the data is transferred on a low priority thread that may be scheduled when higher priority threads are not doing useful work. Vasudeva, paragraph 46. Thus, Vasudeva does not teach or suggest the above recited claim feature.

Bugnion does not provide the missing disclosure or suggestion. Bugnion also does not teach or suggest “determining **whether the instruction requires an immediate VM exit** from the first virtual machine; and exiting the first virtual machine **based on said determining**,” as recited in amended claim 1. Applicant notes that the **Office Action does not rely on Bugnion to teach or suggest the above claim features**. Bugnion discloses a virtual machine monitor for transparently sharing major data structures such as operating system code and file system buffer cache. Bugnion, Abstract. However, the virtual machine monitor of Bugnion does not teach or suggest “exiting the first virtual machine” or “determining whether the instruction requires an immediate VM exit from the first virtual machine,” as recited in amended claim 1. Rather, the virtual machine monitor of Bugnion shares memory using a read-only memory sharing for file systems, such as a root disk whose **modification are not intended to be persistent or shared across virtual machines**. Bugnion, col. 15, lines 45-54 and col. 15, line 66 – col. 16, line 6. Thus, Bugnion does not teach or suggest the above recited claim feature. Therefore, no reasonable combination of Vasudeva and Bugnion discloses or renders obvious “determining whether an instruction requires an immediate VM exit from the first virtual machine; and exiting the first virtual machine based on said determining,” as recited in amended claim 1.

Thus, for at least the foregoing two reasons, Applicant respectfully requests reconsideration and withdrawal of the rejections.

Claims 8 and 15 are independent claims and recite similar language to independent claim 1 in regard to remapping a page and exiting a first virtual machine, and are patentable over any reasonable combination of Vasudeva and Bugnion for at least the foregoing reasons. Thus, Applicant respectfully requests reconsideration and withdrawal of the rejections.

Claims 3-7, 10, 12-14, and 17-20 depend respectively from claims 1, 8, and 15, which, as demonstrated above, are patentable over the document for at least the foregoing reasons. Applicant respectfully requests reconsideration and withdrawal of the rejections.

**IV. NEW CLAIMS 21**

Applicant respectfully submits that claim 21 incorporates limitations from claim 1 and 3-6, which during the telephonic interview of August 21, 2009 the Examiners indicated would be allowable if combined.

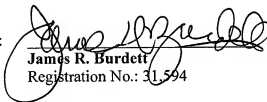
**CONCLUSION**

All of the stated grounds of rejection have been properly traversed, accommodated, or rendered moot. Applicant, therefore, respectfully requests that the Examiner reconsider all presently outstanding rejections and that they be withdrawn. Applicant believes that a full and complete reply has been made to the outstanding Office Action and, as such, the present application is in condition for allowance. If the Examiner believes, for any reason, that personal communication will expedite prosecution of this application, the Examiner is hereby invited to telephone the undersigned at the number provided.

Prompt and favorable consideration of this Amendment is respectfully requested.

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Respectfully submitted,

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